

L21 ANSWER 1 OF 13 MEDLINE  
 AN 97156866 MEDLINE  
 DN 97156866 PubMed ID: 9003247  
 TI **Modulation of the alpha 2 macroglobulin receptor/low density lipoprotein receptor related protein by interferon-gamma in human astroglial cells.**  
 AU Businaro R; Fabrizi C; Persichini T; Starace G; Ennas M G; Fumagalli L; Lauro G M  
 CS Dipartimento di Scienze Cardiovascolari e Respiratorie, Universita La Sapienza, Rome, Italy.  
 SO JOURNAL OF NEUROIMMUNOLOGY, (1997 Jan) 72 (1) 75-81.  
 Journal code: 8109498. ISSN: 0165-5728.  
 CY Netherlands  
 DT Journal; Article; (JOURNAL ARTICLE)  
 LA English  
 FS Priority Journals  
 OS GENBANK-X55077  
 EM 199702  
 ED Entered STN: 19970305  
 Last Updated on STN: 19970305  
 Entered Medline: 19970219

L21 ANSWER 2 OF 13 MEDLINE  
 AN 95072001 MEDLINE  
 DN 95072001 PubMed ID: 7526898  
 TI Presence of LDL receptor-related protein/**alpha 2-macroglobulin receptors** in macrophages of atherosclerotic lesions from cholesterol-fed New Zealand and heterozygous Watanabe heritable hyperlipidemic rabbits.  
 AU Daugherty A; Rateri D L  
 CS Cardiovascular Division, Washington University School of Medicine, St. Louis, MO 63110.  
 NC HL-17646 (NHLBI)  
 SO ARTERIOSCLEROSIS AND THROMBOSIS, (1994 Dec) 14 (12) 2017-24.  
 Journal code: 9101388. ISSN: 1049-8834.  
 CY United States  
 DT Journal; Article; (JOURNAL ARTICLE)  
 LA English  
 FS Priority Journals  
 EM 199412  
 ED Entered STN: 19950116  
 Last Updated on STN: 19960129  
 Entered Medline: 19941230

L21 ANSWER 3 OF 13 MEDLINE  
 AN 94144688 MEDLINE  
 DN 94144688 PubMed ID: 7508685  
 TI Expression of **alpha 2-macroglobulin receptor/low density lipoprotein receptor-related protein** and the 39-kd receptor-associated protein in human trophoblasts.  
 AU Coukos G; Gafvels M E; Wisel S; Ruelaz E A; Strickland D K; Strauss J F 3rd; Coutifaris C  
 CS Department of Obstetrics and Gynecology, University of Pennsylvania School of Medicine, Philadelphia.  
 NC GM-42581 (NIGMS)  
 HD-29946 (NICHD)  
 SO AMERICAN JOURNAL OF PATHOLOGY, (1994 Feb) 144 (2) 383-92.  
 Journal code: 0370502. ISSN: 0002-9440.  
 CY United States  
 DT Journal; Article; (JOURNAL ARTICLE)  
 LA English  
 FS Abridged Index Medicus Journals; Priority Journals  
 EM 199403

ED Entered STN: 19940330  
Last Updated on STN: 19960129  
Entered Medline: 19940317

L21 ANSWER 4 OF 13 MEDLINE  
AN 92366474 MEDLINE  
DN 92366474 PubMed ID: 1502154  
TI Low density lipoprotein receptor-related protein/**alpha 2**  
**-macroglobulin receptor** is an hepatic receptor for  
tissue-type plasminogen activator.  
AU Bu G; Williams S; Strickland D K; Schwartz A L  
CS Edward Mallinckrodt Department of Pediatrics, Washington University School  
of Medicine, St. Louis, MO 63110.  
NC HL08467 (NHLBI)  
HL17646 (NHLBI)  
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF  
AMERICA, (1992 Aug 15) 89 (16) 7427-31.  
Journal code: 7505876. ISSN: 0027-8424.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 199209  
ED Entered STN: 19920925  
Last Updated on STN: 19980206  
Entered Medline: 19920915

L21 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2003 ACS  
AN 1999:180032 CAPLUS  
DN 131:13513  
TI Do P-glycoprotein and major vault protein (MVP/LRP) expression correlate  
with in vitro daunorubicin resistance in acute myeloid leukemia?  
AU Broxterman, H. J.; Sonneveld, P.; Pieters, R.; Lankelma, J.; Eekman, C.  
A.; Loonen, A. H.; Schoester, M.; Ossenkoppele, G. J.; Lowenberg, B.;  
Pinedo, H. M.; Schuurhuis, G. J.  
CS Department of Medical Oncology, University Hospital Vrije Universiteit,  
Amsterdam, 1007 MB, Neth.  
SO Leukemia (1999), 13(2), 258-265  
CODEN: LEUKED; ISSN: 0887-6924  
PB Stockton Press  
DT Journal  
LA English  
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2003 ACS  
AN 1997:188130 CAPLUS  
DN 126:275326  
TI Low density lipoprotein receptor-related protein **modulates** the  
expression of tissue-type plasminogen activator in human colon fibroblasts  
AU Hardy, Medora M.; Feder, Joseph; Wolfe, Richard A.; Bu, Guojun  
CS Dep. of Cell Culture and Biochemistry, Monsanto Co., St. Louis, MO, 63167,  
USA  
SO Journal of Biological Chemistry (1997), 272(10), 6812-6817  
CODEN: JBCHA3; ISSN: 0021-9258  
PB American Society for Biochemistry and Molecular Biology  
DT Journal  
LA English

L21 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2003 ACS  
AN 1997:82858 CAPLUS  
DN 126:169578  
TI The low-density lipoprotein receptor-related protein, a multifunctional  
apolipoprotein E receptor, **modulates** hippocampal neurite

development

AU Narita, Masaaki; Bu, Guojun; Holtzman, David M.; Schwartz, Alan L.  
CS Department of Pediatrics, Washington University School of Medicine, St.  
Louis, MO, 63110, USA  
SO Journal of Neurochemistry (1997), 68(2), 587-595  
CODEN: JONRA9; ISSN: 0022-3042  
PB Lippincott-Raven  
DT Journal  
LA English

L21 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2003 ACS  
AN 1996:717281 CAPLUS  
DN 126:29495  
TI Apolipoprotein E-containing high density lipoprotein promotes neurite  
outgrowth and is a ligand for the low density lipoprotein receptor-related  
protein  
AU Fagan, Anne M.; Bu, Guojun; Sun, Yuling; Daugherty, Alan; Holtzman, David  
M.  
CS Dep. Neurology, Washington Univ. School Medicine, St. Louis, MO, 63110,  
USA  
SO Journal of Biological Chemistry (1996), 271(47), 30121-30125  
CODEN: JBCHA3; ISSN: 0021-9258  
PB American Society for Biochemistry and Molecular Biology  
DT Journal  
LA English

L21 ANSWER 9 OF 13 USPATFULL  
AN 1999:141305 USPATFULL  
TI Adjuvant for transcutaneous immunization  
IN Glenn, Gregory M., Bethesda, MD, United States  
Alving, Carl R., Bethesda, MD, United States  
PA The United States of America as represented by the U.S. Army Medical  
Research & Material Command, Washington, DC, United States (U.S.  
government)  
PI US 5980898 19991109  
AI US 1997-896085 19970717 (8)  
RLI Continuation-in-part of Ser. No. US 1996-749164, filed on 14 Nov 1996  
DT Utility  
FS Granted  
LN.CNT 1988  
INCL INCLM: 424/184.100  
INCLS: 424/449.000; 424/450.000; 424/236.000; 424/240.100; 424/241.100;  
424/275.100; 530/363.000; 530/403.000  
NCL NCLM: 424/184.100  
NCLS: 424/085.100; 424/240.100; 424/241.100; 424/275.100; 424/449.000;  
424/450.000; 530/363.000; 530/403.000  
IC [6]  
ICM: A61K039-00  
ICS: C07K014-005; C07K014-195  
EXF 424/449; 424/450; 424/184.1; 424/236; 424/240.1; 424/241.1; 424/275.1;  
530/363; 530/403  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L21 ANSWER 10 OF 13 USPATFULL  
AN 1999:67356 USPATFULL  
TI Parasitic helminth p22U proteins  
IN Tripp, Cynthia Ann, Ft. Collins, CO, United States  
Frank, Glenn Robert, Ft. Collins, CO, United States  
Grieve, Robert B., Ft. Collins, CO, United States  
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)  
Colorado State University Research Foundation, Ft. Collins, CO, United  
States (U.S. corporation)  
PI US 5912337 19990615  
AI US 1995-460428 19950602 (8)

RLI Continuation of Ser. No. US 1993-109391, filed on 19 Aug 1993, now patented, Pat. No. US 5639876 which is a continuation-in-part of Ser. No. US 1993-3257, filed on 12 Jan 1993, now abandoned Ser. No. US 1993-3389, filed on 12 Jan 1993, now abandoned And Ser. No. US 1991-654226, filed on 12 Feb 1991, now abandoned , said Ser. No. US 3257 which is a continuation-in-part of Ser. No. US 654226 , said Ser. No. US 3389 which is a continuation-in-part of Ser. No. US 654226

DT Utility

FS Granted

LN.CNT 2357

INCL INCLM: 536/023.700

INCLS: 424/184.100; 424/185.100; 424/265.100; 530/350.000; 550/387.100

NCL NCLM: 536/023.700

NCLS: 424/184.100; 424/185.100; 424/265.100; 435/007.220; 530/350.000; 530/387.100

IC [6]

ICM: C07H021-04

ICS: A61K039-00

EXF 424/184.1; 424/185.1; 424/265.1; 530/350; 530/300; 550/380; 550/387.1; 550/388.2; 536/23.7

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L21 ANSWER 11 OF 13 USPATFULL

AN 1998:30893 USPATFULL

TI Non-mammalian DNA virus to express an exogenous gene in a mammalian cell

IN Boyce, Frederick M., Belmont, MA, United States

PA The General Hospital Corporation, Boston, MA, United States (U.S. corporation)

PI US 5731182 19980324

AI US 1995-486341 19950607 (8)

RLI Continuation-in-part of Ser. No. US 1994-311157, filed on 23 Sep 1994

DT Utility

FS Granted

LN.CNT 1730

INCL INCLM: 435/183.000

INCLS: 435/320.100; 435/069.100; 435/070.100

NCL NCLM: 435/183.000

NCLS: 435/069.100; 435/070.100; 435/320.100

IC [6]

ICM: C12N009-00

ICS: C12N015-63; C12P021-02

EXF 435/183; 435/183T; 435/320.1; 435/69.1; 435/70.1

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L21 ANSWER 12 OF 13 USPATFULL

AN 97:104113 USPATFULL

TI Parasitic helminth p4 proteins

IN Tripp, Cynthia Ann, Ft. Collins, CO, United States

Frank, Glenn Robert, Ft. Collins, CO, United States

Grieve, Robert B., Ft. Collins, CO, United States

PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)

Colorado State University Research Foundation, Ft. Collins, CO, United States (U.S. corporation)

PI US 5686080 19971111

AI US 1995-459019 19950602 (8)

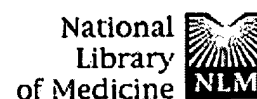
RLI Continuation of Ser. No. US 1993-109391, filed on 19 Aug 1993, now patented, Pat. No. US 5639876 which is a continuation-in-part of Ser. No. US 1993-3257, filed on 12 Jan 1993, now abandoned Ser. No. US 1993-3389, filed on 12 Jan 1993, now abandoned And Ser. No. US 1991-654226, filed on 12 Feb 1991, now abandoned , said Ser. No. US -3257 And Ser. No. US -3389 , each Ser. No. US - which is a continuation-in-part of Ser. No. US -654226

DT Utility

FS Granted

LN.CNT 2279  
INCL INCLM: 424/265.100  
INCLS: 424/154.100; 424/185.100; 424/266.100; 530/350.000; 435/069.100;  
435/069.300; 435/071.100  
NCL NCLM: 424/265.100  
NCLS: 424/184.100; 424/185.100; 424/266.100; 435/069.100; 435/069.300;  
435/071.100; 530/350.000  
IC [6]  
ICM: A61K039-00  
ICS: A61K039-002; A61K039-38; C07K014-00  
EXF 530/350; 530/300; 424/265.1; 424/266.1; 424/184.1; 424/185.1; 435/69.1;  
435/69.3; 435/71.1  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L21 ANSWER 13 OF 13 USPATFULL  
AN 97:52122 USPATFULL  
TI Nucleic acid molecules encoding novel parasitic helminth proteins  
IN Tripp, Cynthia Ann, Ft. Collins, CO, United States  
Frank, Glenn Robert, Ft. Collins, CO, United States  
Grieve, Robert B., Ft. Collins, CO, United States  
PA Heska Corporation, Ft. Collins, CO, United States (U.S. corporation)  
Colorado State University Research Foundation, Ft. Collins, CO, United  
States (U.S. corporation)  
PI US 5639876 19970617  
AI US 1993-109391 19930819 (8)  
RLI Continuation-in-part of Ser. No. US 1993-3257, filed on 12 Jan 1993, now  
abandoned Ser. No. US 1993-3389, filed on 12 Jan 1993, now  
abandoned And Ser. No. US 1991-654226, filed on 12 Feb 1991, now  
abandoned , said Ser. No. US -3257 And Ser. No. US -3389 , each Ser.  
No. US - which is a continuation-in-part of Ser. No. US -654226  
DT Utility  
FS Granted  
LN.CNT 2327  
INCL INCLM: 536/023.700  
INCLS: 536/022.100; 536/023.100; 435/069.100; 435/069.300; 435/071.100;  
424/184.100; 424/185.100; 424/265.100; 424/266.100  
NCL NCLM: 536/023.700  
NCLS: 424/184.100; 424/185.100; 424/265.100; 424/266.100; 435/069.100;  
435/069.300; 435/071.100; 536/022.100; 536/023.100  
IC [6]  
ICM: C07H019-00  
ICS: C07H021-04; C12P021-04; A61K039-00  
EXF 536/27; 536/22.1; 536/23.1; 536/23.7; 424/265.1; 424/269.1; 424/184.1;  
424/185.1; 424/165.1; 424/266.1; 435/69.1; 435/69.3; 435/71.1  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.



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## Very low density lipoprotein receptor from mammary gland and mammary epithelial cell lines binds and mediates endocytosis of M(r) 40,000 receptor associated protein.

Simonsen AC, Heegaard CW, Rasmussen LK, Ellgaard L, Kjoller L, Christensen A, Etzerodt M, Andreasen PA.

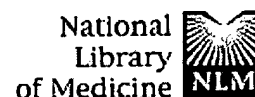
Department of Molecular Biology, University of Aarhus, Denmark.

We here report that the M(r) 40,000 receptor associated protein (RAP), previously found to bind to alpha 2-macroglobulin receptor/low density lipoprotein receptor related protein (alpha 2MR/LRP) and glycoprotein 330 (gp330), binds to an M(r) 105,000 membrane protein from bovine mammary gland, human mamma tumors and mammary epithelial cell lines. We have purified this protein from bovine and human sources. N-terminal amino acid sequencing and immunoblotting analyses showed that the protein was identical or closely related to very low density lipoprotein receptor (VLDL-R). Experiments with the human mamma carcinoma cell line MCF-7 showed that this receptor was able to mediate an efficient endocytosis of RAP. These novel findings strongly suggest that RAP functions as a modulator of ligand binding to VLDL-R, similarly to alpha 2MR/LRP and gp330.

PMID: 7957939 [PubMed - indexed for MEDLINE]

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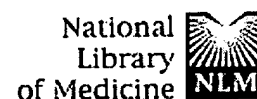
☐ 1: J Biol Chem 1992 May 5;267(13):9035-40Related Articles, <sup>NEW</sup> Books, LinkOut**A novel mechanism for controlling the activity of alpha 2-macroglobulin receptor/low density lipoprotein receptor-related protein. Multiple regulatory sites for 39-kDa receptor-associated protein.****Williams SE, Ashcom JD, Argraves WS, Strickland DK.**

Biochemistry Laboratory, American Red Cross, Rockville, Maryland 20855.

The alpha 2-macroglobulin receptor/low density lipoprotein receptor-related protein (alpha 2MR/LRP) consists of two polypeptides, 515 and 85 kDa, that are noncovalently associated. A 39-kDa polypeptide, termed the receptor-associated protein (RAP), interacts with the 515-kDa subunit after biosynthesis of these molecules and remains associated on the cell surface. This molecule regulates ligand binding of alpha 2MR/LRP (Herz, J., Goldstein, J. L., Strickland, D. K., Ho, Y. K., and Brown, M. S. (1991) J. Biol. Chem. 266, 21232-21238). Titration and binding studies indicate that RAP binds to two equivalent binding sites on alpha 2MR/LRP, with a KD of 14 nM. Heterologous ligand displacement experiments demonstrated that RAP completely inhibits the binding of 125I-activated alpha 2M to human fibroblasts and to the purified alpha 2MR/LRP, with a Ki of 23 and 26 nM, respectively. A direct correlation between the degree of binding of RAP to the receptor and the degree of ligand inhibition was observed, indicating that as the RAP binding sites are saturated, alpha 2MR/LRP loses its ability to bind ligands. Thus, the amount of RAP bound to alpha 2MR/LRP dictates the level of receptor activity. A model is proposed in which alpha 2MR/LRP contains multiple ligand binding sites, each regulated by a separate RAP site.

PMID: 1374383 [PubMed - indexed for MEDLINE]

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☐ 1: Biochim Biophys Acta 1997 Mar 1;1355  
(3):231-40Related Articles, <sup>NEW</sup> **Books**,  
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## Nickel is a specific antagonist for the catabolism of activated alpha 2-macroglobulin.

**Kancha RK, Hussain MM.**Department of Pathology, Allegheny University of the Health Sciences,  
Philadelphia, PA 19129, USA.

The multifunctional low density lipoprotein receptor-related protein/alpha 2-macroglobulin receptor (LRP) binds and degrades several ligands involved in protease and lipoprotein metabolism. We previously reported that nickel (Ni<sup>2+</sup>) specifically inhibits the binding of activated alpha 2-macroglobulin (alpha 2 M\*) at 4 degrees C to LRP and had no effect on the binding of other ligands to the receptor (Hussain et al. (1995) Biochem. 34, 16074-16081). In the current investigation, we have examined the effect of Ni<sup>2+</sup> on the catabolism of 125 I-labeled alpha 2M\*, receptor-associated protein (RAP) and lactoferrin at physiologic temperatures by fibroblasts. Nickel completely inhibited the degradation of alpha 2M\* over a wide range of concentrations (0.3-2.4 nM); 50% inhibition for the degradation of 1.2 nM alpha 2M\* was observed at 0.5 mM Ni<sup>2+</sup>. Furthermore, nickel inhibited the binding, internalization and degradation of 125I-alpha 2M\* in a dose- and time-dependent manner. In contrast, the degradation of several concentrations of 125I-RAP by fibroblasts was not affected by different amounts of Ni<sup>2+</sup> for various times. Similarly, Ni<sup>2+</sup> did not inhibit the degradation of lactoferrin either before or after treating the cells with heparitinase to remove cell-surface proteoglycans. The degradation of lactoferrin was, however, inhibited by the RAP indicating that lactoferrin degradation was mediated by the LRP. These data suggest that Ni<sup>2+</sup> is a specific inhibitor for the degradation of alpha 2M\*.

PMID: 9060994 [PubMed - indexed for MEDLINE]

 Abstract